

REMARKS/ARGUMENTS

A. Elections/Restrictions

Acknowledgement is made of the election of claims belonging to group 1 (claims 1-14) and group 3 (claims 23-34). Claims 15-22 are withdrawn from consideration at this time.

B. Drawings

FIG. 1 stands objected to by the Examiner. The Applicant traverses the Examiner's objection on the grounds that the Examiner has not provided evidence that what is described in FIG. 1 illustrates "that which is old".

C. Abstract

The Examiner objects to the Abstract because the Abstract contains the word "disclosed". Applicant traverses this objection. The Applicant has not referred to "The disclosure", a noun, which is the specific form that is described in MPEP § 608.01(b). The Applicant merely states that a system and method is "disclosed". Applicant asserts that the verb, "disclosed", is acceptable language to use in the Abstract. Withdrawal of the objection is respectfully requested.

D. First Rejection under 35 U.S.C. 102 (Claims 1, 2, and 4-14)

The Examiner has rejected claims 1, 2, and 4-14 as being anticipated by Gronberg et al (2002052800A1) (hereinafter, Gronberg). Applicant disagrees.

Gronberg appears to disclose a method and system for adjusting data flow from an external network to a user terminal. A data flow control algorithm performed by a packet control unit works with a network node from which the packet control unit receives data packets. The packet control unit indicates to the network node the actual transmission rate of a specified data flow and the buffering capacity for the data flow. With this information the network node can adjust the transmission rate for the data flow.

More specifically, Gronberg discloses controlling the sending rate from a SGSN to a BSC in order to avoid overflow and under-run of buffers in the BSC. Gronberg uses a packet control unit (PCU) to control the buffers in the BSC and SGSN. In other words, Gronberg uses layer 2 to layer 2 signaling.

In the Applicant's claimed invention, however, the RNC sends the actual bit rate to the application server (AS) or proxy that is sending the packets (i.e., a middle-to-end signal rather than Gronberg's middle-to-middle signal. Moreover, the Applicant's invention uses a PCU for adjusting the TCP window size at the application level.

Thus, Gronberg performs L2 to L2 signaling while the Applicant's invention performs L2 to L3 signaling. Thus, different segments of the communication chain are affected by Gronberg and the Applicant's invention.

Moreover, Gronberg does not address the actual service setup, i.e., how to trigger the RNC to utilize rate control. The Applicant's invention describes this process including which protocols can be used and message parameters needed for the service to work.

Claim 1 recites the following:

1. A method for controlling the transmission flow rate of data bits in a data bit transfer session from a serving entity to a client, the session involving bit transfer over a wireless communications link, the method comprising:
 - setting up the session by providing a radio control node to establish flow rate parameters relating to the wireless link, wherein the setting up includes:
 - resolving addressing between the radio control node and the serving entity,
 - sending rate control configuration parameters** to the radio control node,
 - generating in the radio control node **an initial rate control (RC) message including initial flow rate parameters**,
 - sending at least one initial rate control message to allow the serving entity to set **initial transmission rates for the session** in accordance with at least one of the initial flow rate parameters;
 - monitoring the wireless communication link; and
 - based on monitoring, sending new flow rate parameters so that the serving entity can update the transmission rate of the session in accordance with the new rate control parameters. (emphasis added)

Regarding claim 1, Gronberg does not disclose (directly or inherently) at least the following features present in claim 1 (similar features can be found in independent claim 23):

- 1) sending rate control configuration parameters;
- 2) generating in the radio control node an initial rate control (RC) message including initial flow rate parameters, and
- 3) sending at least one initial rate control message to allow the serving entity to set initial transmission rates for the session.

The present invention configures a rate control mechanism for controlling the transmission flow rate of data bits in a data bit transfer session from a serving entity to a client. The mechanism utilizes end point or service proxies and generates initial and

ongoing rate control messages. IP address and port or PDP contexts are used to specify the data flows on which to provide Rate Control feedback. A Radio Network Controller sends actual bit rate to the application server (or proxy) sending the packets. In a TCP protocol instance, TCP window sizes are adjusted on the "application" level; i.e., the signaling is between level 2 and level 3.

The Applicant has reviewed the cited portions of Gronberg and finds no reference to generating an initial rate control message that includes initial flow rate parameters being sent to the radio control node. In fact, Gronberg does not address the actual service set-up, i.e., how to alert the Radio Network Controller that rate control should be utilized. Instead, the cited portion of Gronberg indicates that when a downlink TBF is established, the PCU assumes an initial value of R_Def (default value). (page 14, lines7-11). R_Def is the same value for each data flow to all GPRS stations. By providing an initial value, Gronberg limits the initial flow rate of any specific flow rate.

Therefore, the Applicant respectfully submits that Gronberg does not teach or suggest the emphasized elements of claim 1. The Applicant submits that independent claim 23 contains limitations analogous to those found in claim 1. Also, the respective dependent claims of claims 1 and 23 contain the same limitations found in the independent claims. This being the case, the Applicants respectfully submit that claims 1-34 meet the requirements of Article 22.3 of the Patent Law.

E. Second Rejection under 35 U.S.C. 102 (Claim 1)

The Examiner has rejected claim 1 as being anticipated by Bedekar et al (US 7,047,310) (hereinafter, Bedekar). Applicant disagrees.

Bedekar discloses a communication system that includes multiple nodes controls a flow of data from a first node of the multiple nodes to a second node of the multiple nodes without relying on an estimate of a rate at which data is drawn from a buffer of the second node and such that an overflow and an underflow of the buffer is avoided. The second node determines multiple flow control parameters, including a current occupancy (Q) of the buffer and an upper threshold (U) and a lower threshold (L) for an occupancy of the buffer and determines a desired data rate (r) based on the multiple flow control parameters. The desired data rate can be used to adjust a data rate for the flow of data. In another embodiment, the communication system further dynamically controls a rate at which flow control messages are conveyed by the second node to the first node. (Bedekar, Abstract)

The Examiner's attention is directed to the fact that Bedekar fails to teach or suggest "sending at least one initial rate control message to allow the serving entity to set initial transmission rates for the session in accordance with at least one of the initial flow rate parameters".

Applicant's invention configures a rate control mechanism for controlling the transmission flow rate of data bits in a data bit transfer session from a serving entity to a client. The mechanism utilizes end point or service proxies and generates initial and ongoing rate control messages. IP address and port or PDP contexts are used to

specify the data flows on which to provide Rate Control feedback. A Radio Network Controller sends actual bit rate to the application server (or proxy) sending the packets. In a TCP protocol instance, TCP window sizes are adjusted on the "application" level; i.e., the signaling is between level 2 and level 3.

In contrast Bedekar teaches a system that only adjusts an existing data transfer rate after a period of time at least as great as C' has expired. (Bedekar, col. 6, lines 44-50) Bedekar does not teach that its flow control parameters are used to set initial transmission rates for a session. As such, there is no teaching by Bedekar of "sending at least one initial rate control message to allow the serving entity to set initial transmission rates for the session in accordance with at least one of the initial flow rate parameters". Withdrawal of the rejection is respectfully requested.

F. Rejection under 35 U.S.C. 103

Claims 3 and 23-34 stand rejected over various combinations in view of Gronberg and the following references: Chou et al (hereinafter Chou), and Dorensbach et al. (hereinafter Dorensbach) Applicant disagrees.

As argued above with respect to independent claims 1 and 23, Gronberg fails to teach, disclose, or suggest at least the following features present in claim 1 (similar features can be found in independent claim 23):

- 1) sending rate control configuration parameters;
- 2) generating in the radio control node an initial rate control (RC) message including initial flow rate parameters, and

3) sending at least one initial rate control message to allow the serving entity to set initial transmission rates for the session.

Chou and Dorensbach do not cure the deficiencies of Gronberg. At least for this reason, the combination of Gronberg and Chou, and Gronberg, Chau and Dorensbach fails to render claims 3 and 23-34 obvious. Withdrawal of the rejection is respectfully requested.

G. Prior Art Not Relied Upon

In paragraph 14 on page 24 of the Office Action, the Examiner stated that the prior art made of record and not relied upon is considered pertinent to the Applicant's disclosure.

CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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